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Re: Two Well Controlled Experimental Studies that Meet the Federal Guidelines for Evidence Guided Educational Decisions.

Study One-Accelerated Reader vs Non-Accelerated Reader

Study Two-Effect of Increased Individual Reading Time on Reading Achievement

From: Jay Samuels

I am a professor of educational psychology in the College of Education at the University of Minnesota. As a member of the National Reading Panel I co-authored the section on reading fluency, and for seven years was the co-editor of the Reading Research Quarterly, which is published by the International Reading Association. IRA has given me its Wm. S. Gray Research Award and the National Reading Conference awarded me its Oscar Causey Research Award. My reason for listing these awards is to let you know that my background is in reading and as a member of the scientific arm of the National Reading Panel I have an excellent idea about what the government is requiring with regard to evidence based decision-making. The two studies I am summarizing meet the government guidelines and I found some interesting results.

Both studies were done at Hayden Heights Elementary School in St. Paul, Minnesota. The ethnicity of this K-6 school is 57% minority (Hmong, African-Americans, and Hispanic) and 43% Caucasian. All the students receive free breakfast and the achievement level of the school is below the average for the state on the statewide assessment.

The research design for the Accelerated Reader vs. the Non-Accelerated Reader used a 2 x 2 x 2 design in which there were two grade levels (Grades 3 and 5), an

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experimental condition and a control condition, and students were divided into two reading levels. We randomly assigned the Accelerated Reader condition and the Non-Accelerated Reader control condition to teachers and the teachers had assigned students to classes in such a way that the classes were balanced with regard to achievement.

Both the Accelerated Reader and the Non-Accelerated classes had exactly the same amount of time (15 minutes) allocated to in-class individual, silent reading of books, as well as the same amount of time (15 minutes) that the teacher read books aloud to them. In addition, all the students received reading instruction during their 60 minutes language arts block. Students in the Accelerated Reader condition and students in the Non-Accelerated Reader condition had access to books in the school library that were color coded to represent zones of proximal development where the students could read at an appropriate level for their ability. All the students in the study took the Star Reading Test. This test diagnosed the student's reading skill level and designated a zone of proximal development for each student. This zone represents a readability level that is appropriate for the student so that the text matches the student's skill level and would still allow reading achievement growth.

The experimental Accelerated Condition followed recommended procedures. Students took the Star test and were assigned zones of proximal development so they could select books at the library that were appropriate for their reading level. Students were encouraged to read the books carefully so as to get quiz scores that averaged 85% or higher. After reading a book, students in the Accelerated Reader condition took a quiz on the book.

The control non-accelerated reader students also took the Star test and the teachers had access to the scores of the students but the teachers had the discretionary power to have students read at their zone but it was not mandated. When the students in the control Non-Accelerated Reader condition finished

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reading a book they did not take a computerized quiz. In essence, the non-accelerated reader condition mirrored what happens in regular classroom where students are encouraged to read and they do not take a quiz on the books they have completed.

All the students in the study, regardless of condition, were pretested and posttested after ten weeks. Our dependent variable was the gain score. We found that the Accelerated Reader students made 21 weeks of gain and the non-accelerated reader condition made only 9 weeks of gain as measured by the sentence comprehension test on the GRADE Reading Test. On the GRADE passage comprehension and the vocabulary tests, again the Accelerated Reader condition outperformed the non-accelerated condition by a factor of at least 3 to 1, that is, for every month of gain that the control condition made, the experimental students made three months of gain. We also found that the differences were statistically significant. There was one more important finding. When the less good readers who used the Accelerated Reader were compared to the less good readers who were not using the Accelerated Reader, we found the Accelerated Reader low readers significantly outperformed the control students.

Conclusion? In a tightly controlled experimental study, the students who were using the Accelerated Reader made significant gains in comprehension and vocabulary in comparison to students who were not using this system by a factor of about 3 to 1, that is, for every month of gain made by the control condition the experimental condition gained three months. Furthermore, the Accelerated Reader system was especially useful for the less good readers. These positive results in comprehension and vocabulary resulted from fifteen minutes of reading that was motivated and supported by a software system that motivated students to read books that matched their level of reading skill with great care.

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Study Two-Effect of Increased Individual Reading Time on Reading Achievement.

This experimental study investigated achievement gains for students who read silently for 40 minutes in contrast to students who read silently for only 15 minutes. Students were randomly assigned to conditions. All the teachers and the students followed accepted Accelerated Reader procedures. We found that the students who read for 40 minutes significantly outperformed the students who read for 15 minutes on a variety of tests such as the Star test of reading ability, speed of reading as measured by Curriculum Based Measurement, and word recognition. Other studies that found more time spent reading were associated with greater gains used correlational designs where one could not pin-point cause and effect. What was unique about this study was that we used an experimental design where we could assign causality, namely that time spent in reading led to the achievement gains. This study demonstrated Mathew Effects in reading, that is, those who spent more time reading prospered the most.